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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,104	09/17/2003	Toshinari Takayanagi	004-9196	3693
22120	7590	08/12/2005	EXAMINER	
ZAGORIN O'BRIEN GRAHAM LLP 7600B N. CAPITAL OF TEXAS HWY. SUITE 350 AUSTIN, TX 78731			LE, THONG QUOC	
			ART UNIT	PAPER NUMBER
			2827	

DATE MAILED: 08/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/664,104	Applicant(s) TAKAYANAGI, TOSHINARI	
	Examiner Thong Q. Le	Art Unit 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 13-22, 24-30, 32, 34-43 and 45-48 is/are rejected.
- 7) ☒ Claim(s) 9, 12, 23, 31, 33 and 44 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/21/05</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
6) <input type="checkbox"/> Other: _____. |
|---|---|

DETAILED ACTION

1. Amendment filed on 06/21/2005 has been entered.
2. Claims 1-58 are presented for examination.

Information Disclosure Statement

3. This office acknowledges receipt of the following items from the Applicant:
Information Disclosure Statement (IDS) filed on 06/21/2005.
4. Information disclosed and list on PTO 1449 was considered.

Response to Arguments

5. Applicant's arguments with respect to claims 1-58 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

6. Regarding claim 44, line 1, should be changed "The sensing circuit" to –The circuit--.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-8,10-11,13-22,24-30,32,34-43,45-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Komarek et al. (U.S. Patent No. 5,650,979).

Regarding claim 24, Komarek et al. disclose a circuit (Figure 10) comprising first and second matched devices (136) which are susceptible to an accumulated data-dependent post-manufacture shift in a characteristic of one or more of the matched devices, said shift giving rise to a mismatch in the characteristic between the matched devices (Column 27, lines 14-16); and a preconditioning circuit (Column 11, lines 54-63) for subjecting the matched devices to a particular condition for a length of time sufficient to cause an initial shift in the characteristic in each of the matched devices and to thereby reduce an expected magnitude of any further lifetime shift in the characteristic of either match device (Column 2, lines 10-13, Column 17, lines 14-41), and the first and second matched devices together comprise a cross-coupled pair of transistors within a sensing circuit of a semiconductor memory (Figure 10, 136), and cross-coupled pair of transistors comprises a PMOS transistors (Figure 10, P), and wherein the preconditioning circuit comprises means for applying a substantially uniform bias history across both first and second matched devices (Figure 10, VBIAS), and wherein the preconditioning circuit comprises means for subjecting each of match devices substantially equal time durations of a predetermined bias condition know to promote the shift in the characteristic (Figures 12-13) and the matched devices comprises field effect transistors (Figure 10, 136), and the predetermined bias condition includes a negative gate-to-source voltage (Figure 15, B negative voltage), and the characteristic

is a threshold voltage (Figure 15), and a pair of bit lines, memory cells coupled to respective ones of the bit line pairs (Figure 9).

Regarding claims 1-,8,10,11,13-22 the apparatus discussed above would performed the method in these claims.

Allowable Subject Matter


9. Claims 9,12,23, 31,33,44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 31,33,44 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Komarek et al. (U.S. Patent No. 5,650,979), and others, does not teach the claimed invention having wherein the one data state and the another data state are conveyed serially on a test data bus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai V. Ho can be reached on 571-272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le
Primary Examiner
Art Unit 2827

THONG LE
PRIMARY EXAMINER